UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,027	09/13/2003	Joseph W. Coburn JR.	15262	3503

55547 7590 10/03/2005

R. GALE RHODES, ESQ. / MOSER IP LAW GROUP
1040 BROAD STREET
2ND FLOOR
SHREWSBURY, NJ 07702

EXAMINER	
CHANG, AUDREY Y	
ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/664,027	COBURN ET AL.	
	Examiner	Art Unit	
	Audrey Y. Chang	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 8-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remark

- This Office Action is in response to applicant's amendment filed on August 1, 2005, which has been entered into file.
- By this amendment, the applicant has canceled claim 7.
- Claims 1-6, and 8-15 remain pending in this application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Sekimura et al (PN. 4,786,148).

Sekimura et al teaches a *laminated color filter* that is comprised of a layer of *colored resin film* that is formed on a *transparent glass substrate* with a *primer* such as *silane*, serves as *the adhesive layer* intermediate between the colored resin layer and glass substrate to increase the bonding strength between the two, (please see column 7, lines 10-45). The colored resin film, which is a *plastic* film, is formed by having colorants, such as dye or color pigments mixed in the resin, (please see column 6, lines 35-39). The silane adhesive layer is known in the art to be *a pressure sensitive adhesive.*

This reference has therefore anticipated the claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3-6 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Sekimura et al in view of the Japan patent issued to Watanabe et al and US patent issued to Kobayashi (PN. 5,757,443).

Sekimura et al teaches a *laminated color filter* that is comprised of a layer of *colored resin film* that is formed on a *transparent glass substrate* with a *primer* such as *silane*, serves as *the adhesive layer* intermediate between the colored resin layer and glass substrate to increase the bonding strength between the two, (please see column 7, lines 10-45). The colored resin film, which is a plastic film, is formed by having colorants, such as dye or color pigments mixed in the resin, (please see column 6, lines 35-39).

Sekimura et al teaches that the colored resin layer may be a layer of **polycarbonate**, which has *a definite thermal conductivity*. The glass substrate presumably has a definite thermal conductivity also. The silane adhesive layer is known in the art to be *a pressure sensitive adhesive*. It is implicitly true that the thermal conductivities for the polycarbonate layer, the glass substrate and the adhesive layer will cause heat transfer between the layers. However this reference does not teach explicitly to use a glass substrate with higher thermal conductivity than the colored resin layer to convey the heat transfer from the colored resin to the substrate or base. **Watanabe** et al in the same field of endeavor teaches to have the *color filter* (2) having a *transparent film* (3) with *high thermal conductivity* so that heat accumulated in the color filter is transferred to the transparent film (3) and released outside, (please see the abstract and Figures 1 and 2). **Kobayashi** in the same field of endeavor also teaches to use a *heat-dissipating glass* with high thermal conductivity to release heat out of a display device. It would then have been obvious to

apply the teachings of **Watanabe** et al and **Kobayashi** to use a *heat-dissipating glass* with high thermal conductivity as the *glass substrate* of the color filter of Sekimura et al to for the benefit of allowing the heat accumulated in the colored-resin or plastic layer be transferred to and dissipated through the glass substrate to reduce possible heat damage to the colored resin layer and therefore the color filter.

With regard to claims 4-5, Sekimura et al teaches that the colored resin layer is a layer *polycarbonate* which is a *thermoplastic material*, (please see column 7, line 17).

With regard to claims 6-9, Sekimura et al teaches that the substrate is a transparent glass but it does not teach explicitly that the glass substrate includes Pyrex or quartz glass. **Kobayashi** in the same field of endeavor teaches that the *heat-dissipating glass may be quartz glass*, (please see column 4, lines 14-15). It would then have been obvious to one skilled in the art to use quartz glass as the glass substrate for the color filter for the benefit of allowing heat accumulated in the colored resin layer to be dissipated out. With regard to claim 9, it is implicitly true that the thermal conductivity for the quartz glass is four times of the thermal conductivity of colored polycarbonate layer.

With regard to claims 10-13, these references do not teach explicitly about the layer thickness for the various layers. However such thickness are either inherently met by the disclosure or obvious modifications to one skilled in the art for the benefits of making the color filter with desired color characteristics as well as good heat dissipation to protect the laminated color filter.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Sekimura et al in view of the patent issued to Takushima et al (PN. 6,465,092).

The laminated color filter taught by **Sekimura** et al as described for claim 14 above has met all the limitations of the claim with the exception that it does not teach explicitly that a release layer is attached to the adhesive layer. However using a release layer with an adhesive layer in a laminated optical element is very common in manufacturing process of the laminated optical element as taught by

Takushima et al. Takushima et al teaches that a release layer may be formed on an adhesive layer such that it provides convenience to the manufacturing process of an laminated optical element since it make the optical element easily being adhered and released from object or substrate adhered to, (please see column 16, lines 13-26).

Response to Arguments

6. Applicant's arguments filed on August 1, 2005 have been fully considered but they are not persuasive.

In response to applicant's arguments concerning the cited **Sekimura** reference does not teach to include a transparent adhesive laminating the dye-colored plastic and the glass substrate which therefore differs from the instant application, the examiner respectfully disagrees for the following reasons. **Firstly**, this "transparent adhesive layer" is **not claimed** in independent claim 1, so this argument cannot be relied upon to overcome the rejection for claim 1. **Secondly**, applicant's arguments, (affidavits, filed on August 1, 2005), concerning silane are wrong. The name "silane" stands **a class of** compounds and the types of Silane used as an adhesive is not of a gas state. The cited Sekimura reference teaches *specifically* that the silane is used as "*coupling agent*" for "*increasing* the bonding strength between colored resin and the substrate", (please see column 7, lines 36-42), which *explicitly states* that the silane is used as *adhesive* for *adhering and boding* the two layers tightly. Although Sekimura has identified the silane being applied on the glass substrate as a primer, the function of this primer however is explicitly stated by the reference to "increase the bonding strength required between colored resin film and substrate", which means the primer silane functions as an adhesive. The applicant has mistakenly states that a primer is not an adhesive. The prior art references: US patent (4,911,984, column 4, lines 35-40), US patent (5,136,679, column 7, lines 39-43) and US patent (4,963,614, column 1, lines 15-18) each teaches specifically using **silane primer** as **adhesive** for boding glass to resin layer. Furthermore, it is known in the art that silane is transparent. **This reference therefore reads on the claims.**

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent (4,911,984) issued to Parker, US patent (5,136,679) issued to Broer et al and US patent (4,963,614) issued to Ito et al each teaches specifically using **silane primer** as **adhesive** for boding glass to resin layer.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). *(Noted: claim 7 has been canceled).*

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 571-272-2309. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Audrey Y. Chang, Ph.D.
Primary Examiner
Art Unit 2872

A. Chang, Ph.D.